

NORTH PACIFIC OCEAN

By WILLIS E. HURD

The Aleutian cyclone continued, being very active for the season, with pressure below the normal over its entire area, and with the center still over the western part of the Gulf of Alaska and the adjacent peninsula, as in March. Separate lows from this northern base entered the American mainland north of the forty-fifth parallel on 10 dates. The north Pacific anticyclone was also in the main well developed, being practically normal in average pressure, and having fewer cyclonic intrusions than usual for the season.

Pressure data for several island and continental stations in west longitudes are given in the following table:

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level at indicated hours, North Pacific Ocean, April, 1928

Stations	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	<i>Inches</i>	<i>Inch</i>	<i>Inches</i>		<i>Inches</i>	
Dutch Harbor ¹	29.64	-0.19	30.50	6th	28.86	26th.
St. Paul ^{1,2}	29.73	-0.07	30.66	6th	28.84	22d.
Kodiak ^{1,2}	29.57	-0.23	30.14	8th	29.00	20th.
Midway Island ^{1,3}			30.26	29th.	28.80	7th.
Honolulu ⁴	30.04	-0.03	30.13	22d.	28.92	8th.
Juneau ⁴	29.84	-0.12	30.57	6th	28.34	27th.
Tatoosh Island ^{4,5}	29.06	-0.08	30.56	6th	29.34	2d.
San Francisco ^{4,5}	30.06	+0.02	30.29	18th.	29.83	2d.
San Diego ^{4,5}	29.97	+0.01	30.14	9th	29.77	28th.

¹ P. m. observations only.

² For 27 days.

³ 9 days missing; average not used.

⁴ A. m. and p. m. observations.

⁵ Corrected to 24-hour mean.

Gales decreased in numbers and general intensity since March, this being especially true of the eastern half of the ocean. The majority of those experienced in west longitudes attained a force no higher than 8 or 9, though the maximum, occurring on three days, was force 10, as shown by the gale reports. Along the upper half of the routes between the west coast of the United States and Honolulu moderate gales were encountered by vessels on the 1st, 2d, 15th, 24th, and 25th. A norther of force 9 occurred off the southern coast of Mexico on the 16th.

Stormier conditions prevailed over the upper western half of the ocean. This was in part due to the unsettled

weather conditions existing in Asiatic waters. The continental anticyclone broke up to a great extent over China and the neighboring waters. In consequence the northeast monsoon current became enfeebled and at the end of the month had wholly disappeared, while a number of depressions, most of them of a minor character, gathered over southern waters. Some, however, developed local intensity, and one became a violent storm. This originated on the 21st in the Eastern Sea. It developed with rapidity, causing strong gales over southern and central Japan and adjacent waters on the 22d, and over central and northern Japan on the 23d, on which date the strongest gales occurred at sea, full storm winds being experienced off the northeastern part of the archipelago. Other gales of force 11 occurred south of Japan on the 15th, in connection with a moderate depression there, and on the 29th, near 48° N., 170° E., at which time a large area southwest of the Aleutians was swept by gales.

At Honolulu the wind continued to prevail from the east, but with average velocity the lightest on record for April. The maximum velocity was at the rate of 26 miles an hour from the east on the 30th.

It was observed in March that fog was beginning to form more actively in east longitudes, especially along the upper sailing routes and in the coastal waters of China. A far greater increase occurred over this region in April, the percentage of days with fog rising, from the 5 to 10 per cent maximum of the previous month, to one of 20 to 30 per cent in the present month. Fog also occurred on several days in the Eastern and Yellow Seas. A report from the American steamer *Dickenson*, Midway Island to Honolulu, from March 31 to April 5, said: "Fog has been encountered almost every morning and evening, coming up from the SE. or S. in low-moving masses." Scattered fog was met with in west longitudes, but was not frequent even along the American coast, although reported to and slightly below the twentieth parallel. Observers Slayton and Ihle, of the American motor ship *William Penn*, saw fog on the 15th in 17° 27' N., 116° 26' W. Quoting from their report:

At 3.50 a. m. * * * moderate north wind and sea. Weather clear and cloudy. Air temperature, 70°; sea, 74°. A large rainbow was sighted ahead; 3.55 a. m., ship ran into very heavy fog, obstructing moon and stars; 4.05 a. m., 10 minutes later, fog lifted just as suddenly as it came.

Waterspouts were reported off the coast of Costa Rica on the 23d and 29th.